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Fabio D'Orlando, Francesco Ferrante and Gabriele Ruiu•

Abstract

This paper has two main goals. The first is to provide empirical evidence that differences in labour market institutions across countries and, specifically, in how they provide protection to workers, can be attributed to underlying differences in culturally-based prior beliefs: in particular, people's fatalism and trust in others. The second goal is to single out the socio-economic factors associated with these beliefs and the role of education in this regard.

Keywords: Culture, Fatalism, Trust in Others, Labour Market Institutions, Employment Protection Legislation

JEL Classifications: D7, E24, E6, J3

Introduction

The interactions between culture and institutions and the link between institutions and economic performance are at the forefront of economic analysis. In particular, *fatalism* and *trust in others* appear two among the most important culturally-based prior beliefs that impact on institutions. But while the connection between trust and institutions has been widely investigated, the role of *fatalism*, notwithstanding its importance in people's socio-economic attitudes, is still neglected. It is surprising that a personality trait so important in characterizing people's expectations concerning the link between actions and results has received so little attention, particularly in regard to analysis of the labour market and its institutions.

The assumption adopted here, and which finds support in the empirical as well as theoretical literature (Guiso et al. 2002, 2006 and 2009; Tabellini, 2005), is that culturally-based prior beliefs are quite stable and that they can consequently be treated as exogenous factors in the political process leading to the implementation of labour market institutions.

On these premises, the first goal of our paper is to verify whether international differences in the way protection is provided to workers, and in particular in the extent of job protection, may reflect underlying differences in culturally-based beliefs. Drawing on D'Orlando and Ferrante (2008 and 2009), we point out that *fatalism* and *trust in others* should have major impacts on the demand for labour market regulation and, in particular, on the demand for job protection, i.e. employment protection legislation. From this it follows that differences in the levels of *fatalism* and *trust in others*, to the extent that people's preferences affect the choices of institutions, should explain the existing differences in labour market regulations among countries and, eventually, the extent of political opposition to deregulation.

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The second goal of our paper is to investigate the socio-economic and demographic determinants of, or at least the socio-economic and demographic traits that appear to be associated with *fatalism* and *trust in others*. Specifically, as to be expected, we find that people's prior beliefs depend, over and above the effects of their innate propensities and socioeconomic backgrounds, on their cognitive skills and on non-cognitive traits acquired through education. On these grounds, we suggest that poorly-educated individuals are those most affected by culturally transmitted beliefs such as *fatalism* and *trust in others*.

In order to provide support for these contentions we carry out an empirical investigation based on the World Value Survey which expands and strengthens D'Orlando and Ferrante's (2008 and 2009) analysis. Like Aghion et al. (2008), we find that *trust in others* is negatively related to the demand for job protection and, like Ferrante and D'Orlando (2008 and 2009), we find a positive relation between *fatalism* and the demand for job protection . Moreover, our estimates show that employment protection legislation and unemployment benefits are effective means with which to reduce the workers' perception of insecurity and that, in this regard, the quality of the legal system matters as well.

The paper is organized as follows. Section 1 furnishes evidence of the main differences existing among the levels and modes of protecting workers and their families against unemployment risk in the OECD; section 2 discusses the influence of culturally-based prior beliefs on labour market institutions; section 3 presents the empirical strategy and results; section 4 concludes.

1. Some empirical evidence: Labour market institutions in OECD Countries.

Workers can be protected against unemployment by means of two main labour market institutions: unemployment benefits (UB) and employment protection legislation (EPL). It is consequently a matter of interest to determine whether different countries have used these two instruments in different ways and, if so, to try to understand why they have done so.

Empirical evidence confirms that the combination of these two forms of protection differs greatly among the 20 OECD countries examined. Table 1 reports EPL, this being the well-known OECD index of labour market rigidity which takes account of a large set of factors regarding labour contract regulations (Nicoletti, Scarpetta and Boylaud 2000), and the replacement ratio RR, i.e. an index of generosity of UB, for twenty countries and for three years (1982, 1992, 2002). In particular, RR is given by the average benefit replacement rate[1] during the first year of unemployment.

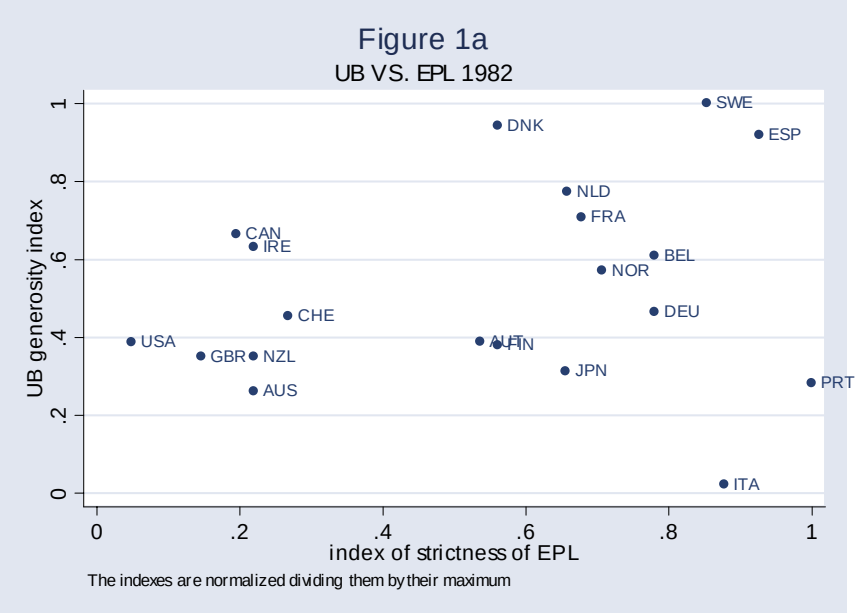
[1] See Clark et al. (2005) for a brief discussion of the advantages/disadvantages of using indicators of this type.

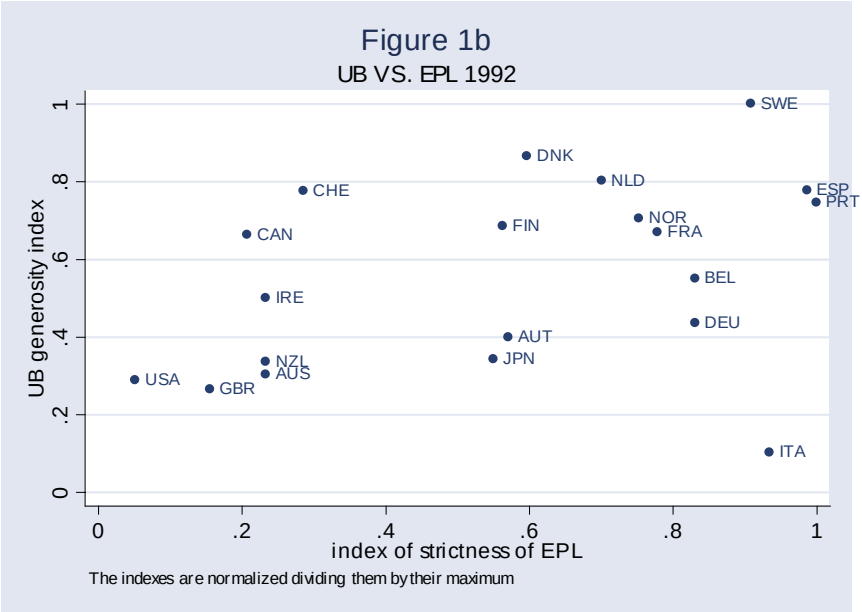
Table 1: EPL rigidity index and average replacement rate in 20 OECD Countries

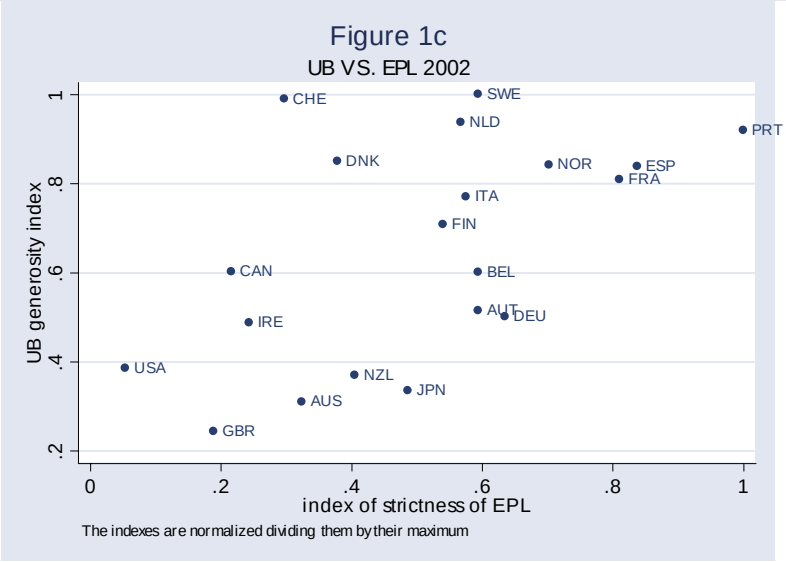
Country	EPL 1982	EPL 1992	EPL 2002	RR 1982	RR 1992	RR 2002
Australia	0.9	0.9	1.2	21.95	26.45	23.49
Austria	2.2	2.2	2.2	32.67	34.8	38.96
Belgium	3.2	3.2	2.2	51.225	47.95	45.49
Canada	0.8	0.8	0.8	55.85	57.8	45.56
Switzerland	1.1	1.1	1.1	38.2	67.65	75
Germany	3.2	3.2	2.35	39	38	37.95
Denmark	2.3	2.3	1.4	79.25	75.5	64.42
Spain	3.8	3.8	3.1	77.25	67.75	63.53
Finland	2.3	2.17	2	31.875	59.81	53.62
France	2.78	3	3	59.5	58.4	61.3
Great Britain	0.6	0.6	0.7	29.45	23.05	18.46
Ireland	0.9	0.9	0.9	53.06	43.56	36.93
Italy	3.6	3.6	2.13	1.81	8.81	58.31
Japan	2.69	2.12	1.8	26.2	29.8	25.35
Netherlands	2.7	2.7	2.1	65	70	70.99
Norway	2.9	2.9	2.6	48	61.5	63.79
New Zealand	0.9	0.9	1.5	29.42	29.29	27.96
Portugal	4.1	3.85	3.7	23.64	65	69.66
Sweden	3.5	3.5	2.2	84.1	87.25	75.77
USA	0.2	0.2	0.2	32.55	25.15	29.19

Source: Bassanini and Duval (2006)

The twenty countries considered here can be divided into two groups: Australia, Canada, Great Britain, Ireland, New Zealand, Switzerland, USA are characterized by low levels of EPL stringency, while Austria, Belgium, Denmark, Finland, France, Germany, Italy, Japan, Netherlands, Norway, Portugal, Spain, Sweden display relatively high levels of stringency. The Scandinavian, Mediterranean (especially in the last decade) and Central European countries (with the exception of Austria and Germany) tend to exhibit more generous replacement rates than both the English-speaking European countries and other extra-European countries (with the exception of Canada). We also create a normalized version of EPL and RR dividing the indicators by the respective sample maximum. In figures 1a, 1b and 1c we plot the normalized RR against the normalized EPL for three years (1982, 1992, 2002) in order to gain an immediate picture of different countries' choices between regulation and benefits. The three figures suggest that there have been no major changes over time.







As shown by table 2, which reports the stringency of EPL for regular and temporary contracts, reforms in countries characterized by strict regulation have been implemented principally by giving greater flexibility to temporary contracts while leaving permanent ones unchanged, thereby creating a “dual” labour market.

Table 2: EPL regular contracts and EPL temporary contracts

Country	EPL reg 1982	EPL temp 1982	EPL reg 1992	EPL temp 1992	EPL reg 2002	EPL temp 2002
Australia	1	0.875	1	0.875	1.5	0.875
Austria	2.92	1.5	2.92	1.5	2.92	1.5
Belgium	1.68	4.625	1.68	4.625	1.72	2.625
Canada	1.32	0.25	1.32	0.25	1.32	0.25
Switzerland	1.16	1.125	1.16	1.125	1.16	1.125
Germany	2.58	3.75	2.58	3.75	2.68	2.025
Denmark	1.52	3.125	1.52	3.125	1.47	1.375
Spain	3.88	3.75	3.88	3.75	2.61	3.5
Finland	2.78	1.875	2.47	1.875	2.17	1.875
France	2.51	3.06	2.34	3.625	2.46	3.625
Great Britain	0.95	0.25	0.95	0.25	1.12	0.375
Ireland	1.6	0.25	1.6	0.25	1.6	0.25
Italy	1.77	5.375	1.77	5.375	1.77	2.5
Japan	2.38	3	2.44	1.8	2.44	1.25
Netherlands	3.08	2.375	3.08	2.375	3.05	1.19
Norway	2.25	3.54	2.25	3.54	2.25	2.875
New Zealand	1.35	0.375	1.35	0.38	1.7	1.25
Portugal	4.83	3.375	4.33	3.375	4.33	3
Sweden	2.9	4.08	2.9	4.08	2.86	1.625
USA	0.17	0.25	0.17	0.25	0.17	0.25

Source: Bassanini and Duval (2006)

The economic literature has proposed various explanations for these different attitudes to workers' protection. Here we briefly discuss the most frequent of them.

2. Culturally-based beliefs and the demand for job protection

2.1 Why protect workers and how?

The economic literature puts forward two main explanations for the origin of employment protection legislation and unemployment benefits. On the one hand, there is the belief that the existence of these labour market institutions reflects the equilibrium resulting from the interaction between insiders (employed workers) and outsiders (unemployed workers). If the former have more political power, they are able to impose a system of job protection that strengthens their bargaining position at the expense of the unemployed and of society as a whole (Saint-Paul 1993, 1996, 1997, 2002; Boeri et al. 2004). In this regard, Boeri et al. (2004) have shown the existence of a trade-off between EPL and UB, where the different locations of countries along this continuum stem from heterogeneity in the skills levels of labor force. In particular, they argue that, given the redistributive nature of EPL (from high-skilled to low-skilled workers), countries characterized by a less skilled labor force and a compressed wage structure (with low wage differentials between high- and low-skilled workers) should prefer EPL to UB.

On the other hand, there is the view that employment protection legislation is an instrument that furnishes social insurance to risk-adverse workers in an incomplete market context (Acemoglu and Shimer, 1999; Agell, 1999 and 2000; Bertola, 2004). According to this approach, "[I]n the special case where workers' marginal utility is constant, the model illustrates the simple insights outlined above: EPL is neutral in steady state if it mandates redundancy payments directly from employers to workers, and is welfare-decreasing if it

entails dead-weight losses. But when labour-income uncertainty is not privately diversifiable, then collectively administered EPL can address that imperfection, and improve both productive efficiency and workers' welfare" (Bertola, 2004, p. 44). The latter approach provides a rationale for job protection but does not address the choice of how to provide it.

Within these approaches no room is left for the role of culturally-based workers' and households' preferences for job security.

2.2 Culture and Institutions

Only recently have economists begun to deal with culture by investigating how it affects economic performance by shaping institutions. The concept of culture and culturally-based prior beliefs is too broad for empirical investigation. Hence, we must first clarify the notion of culture that is adopted here. To do so, we follow Guiso, Sapienza and Zingales (2006, p.699): "[W]e define culture as those customary beliefs and values that ethnic, religious and social groups transmit fairly unchanged from generation to generation". These customary beliefs indubitably have an impact on people's choices, attitudes and behaviors, but the view that culture impacts on institutions is subject to the criticism of reverse causality, i.e. the argument according to which the causal relation does not go only from culture to institutions but also operates *vice versa*: that is, culture shapes institutions and institutions shape culture.[2] To justify the choice of considering culturally-based beliefs as determinants of economic behavior, and hence of institutions (in our case, labor market institutions), it is therefore of crucial importance that the cultural traits which we consider not only influence economic behavior and institutions but also are quite stable over time, being a legacy transmitted from one generation to the next.

The distinction between psychological or personality traits and culturally-based prior beliefs is not clear-cut. It is not the purpose of this paper to discuss the large body of studies in psychology, sociology and anthropology on this subject. Instead, in light of these studies, its contention is that prior beliefs pertain to the social sphere: in other words, culturally-based beliefs are a social construct, whereas psychological traits belong to the individual sphere (Church, 2000).

Among the cultural traits that may have an impact on labor market institutions, we focus on *trust in others* and *fatalism*, in that these appear to be among the most important factors motivating economic behaviors and, specifically, the demand for labour market regulation and workers' protection. Moreover, they easily pass the test of stability and exogeneity with respect to labour market institutions. However, *respect for others*, *confidence in the link between effort and economic success*, and *public spiritedness* are equally considered in the literature.

In particular, as noted by Tabellini (2005), a low level of *trust in others* and scant confidence in the link between effort and economic success (in our interpretation, high *fatalism*) are different cultural traits, but they are both typical of hierarchical societies characterized by marked pessimism about the correctness of other people's actions. In such societies, the community requests the state to intervene by enacting rigorous regulations that prevent people from assuming opportunistic behaviors. These societies are also characterized by the central role of the family in the individual's life. Young people tend to remain longer in the family of origin and to form their own families later. The traditional family values

[2] For instance Aghion et al. (2008) propose a model where if people expect to live in a civil community, they expect low levels of regulation, and so invest in social capital. Their beliefs are justified, and investment leads to civility, low regulation, and high output. When in contrast people expect to live in an uncivil community, they do not invest in social capital and remain uncivil and unproductive. Their beliefs are again justified, because a lack of investment leads to incivility, high regulation, high corruption, and low production.

(obedience, respect for the father, etc.) are given priority over all other values (autonomy, good civic attitudes, etc). The family comes first, and people outside the household are regarded with suspicion and considered untrustworthy. This 'family-centered' way of life may be an important determinant of the persistence of cultural traits.

Empirical analysis has devoted by far the most attention to trust; by contrast, *fatalism* has been treated in the medical and epidemiological literature but neglected by the economic literature.

Aghion et al. (2009) show that *distrust in others* is strongly positively correlated with various measures of regulation (product and labor market regulation, judicial procedure). Algan and Cahuc (2006a) note that the Danish flexicurity model, characterized by high unemployment benefits and low job protection, relies on strong public-spiritedness and is hardly implementable in the Continental and Mediterranean European countries, where these values are less strong. Tabellini (2005) argues that culture, measured by indicators of individual values and beliefs such as *trust*, *respect for others* and *confidence in the link between effort and economic success*, is a fundamental channel through which history influences the functioning of current institutions. Barro and McCleary (2002) argued that stronger religious beliefs stimulate economic growth because they sustain aspects of individual behavior that enhance productivity, and they viewed the relation between religion and economic growth as a causal one. Finally, Pinotti (2009) has developed a model whose main conclusions are that, within each economy, the individual demand for regulation depends negatively on trust towards others, and that ignoring trust (as a proxy for average trustworthiness) biases estimations of the effects of market failures upwards.

D'Orlando and Ferrante (2009) argue that less educated workers with a fatalistic view of life tend to demand more job protection (where by 'fatalistic view of life' is meant a propensity to believe that life events are driven by fate rather than by actions). Wu (2005) analyzed the role of *fatalism* in determining household savings behavior, finding that people characterized by fatalistic beliefs are less likely to save. There is strong evidence in the medical literature on the role of *fatalism* in health screening behavior (Straughan and Seow 1998, Nelson et al. 2002, Niederdeppe and Levy 2007). In particular, Nelson et al. (2002) showed that *fatalism*, viewed as a cultural belief closely bound up with ethnical origin, is associated with delays in seeking health care.

Licht et al. (2004) focus on three cultural traits: autonomy/embeddedness (relative to the relation between individual and group), hierarchical/egalitarianism (relative to the ways in which socially responsible behavior is ensured), and mastery/harmony (relative to humankind's relations with the natural and social worlds). They find that countries oriented to autonomy and egalitarianism are characterized by better social institutions (greater rule of law, less corruption, more democratic accountability). In order to assess the causality from culture to institutions, they used the grammar of pronouns as an instrumental variable for autonomy/embeddedness. Drawing on psychological evidence, they argued that languages in which it is permitted to drop the person-indexing pronouns (I, you, etc.) reflect a more embedded culture. By contrast, languages that require the explicit use of pronouns place more emphasis on a person's contextualization and uniqueness.

Finally, Algan and Cahuc (2006a) explain the difficulty of implementing a UB system in the Continental and Mediterranean countries as due to a scarcity of public-spiritedness, which they view as culturally determined. The authors show that the stringency of employment protection in Mediterranean countries can be partly explained by cultural values embedded in religions. In particular they find that, compared to Catholic countries, Protestant ones tend to reduce the level of employment protection, while Muslim and Orthodox ones (with a very similar effect) tend to increase it.

2.3 Fate and Fatalism

Although the precise meaning of the word *fatalism* changes across cultures and religions, it can be linked with people's propensity to believe that their destinies are ruled by an unseen power – Fate – rather than by their will. Indeed, the concept of *locus of control* developed in psychology[3] is akin to the concept of *fatalism*, because moving from an internal to an external locus of control inevitably entails an increasingly fatalistic view of life.

The concept of *fatalism* has been central to the development of religious and philosophical thought. Of course, this is not surprising because the question f whether or not our destinies are under our control is at the root of our thoughts and has shaped our cultural evolution. As in the case of trust, *fatalism* can be expected to be culturally transmitted from one generation to the next. But there are differences regarding how *fatalism* is conceived within different cultures and religions that should be taken into account when investigating the role of *fatalism* in different societies. In classical thought, as well as in Oriental religion, fate is a dark and sinister power related to a tragic vision of life. It connotes, not the absence of freedom but the subjection of freedom. It is the transcendent necessity in which freedom is entangled. Fate is blind, inscrutable, and inescapable. Christianity substituted the Hellenistic concept of fate with the doctrine of divine providence. Whereas fate is the portentous, impersonal power that rules over human freedom, providence liberates humankind to fulfill the destiny for which it was created. Fate means the abrogation of freedom; providence means the realization of authentic freedom through submission to divine guidance. *Fatalism* was present among the ancient Stoics, and it pervades much of the thought of Hinduism, Buddhism, and Islam.

2.4 Fatalism, trust in others and social protection

Apart from their impact on other economic institutions, culturally-based beliefs are important elements to consider when seeking to explain the observed heterogeneity in how different societies furnish job protection. Our contention is that *fatalism and trust in others* play a separate and essential role in the demand for job protection and, more importantly, in the choice of the preferred way to provide such protection.

Fatalism and trust in others affect the demand for protection through different mechanisms. Drawing on D'Orlando and Ferrante (2009) and extending their analysis on the empirical side, we suggest that the subjective cost of unemployment can be divided into a monetary cost (the income loss) and a psychological cost (the subjective perception of being unable to cope with drastic negative changes in life). *Fatalism* affects the non-pecuniary, psychological costs of unemployment, i.e. a utility loss that does not disappear even if the income loss is entirely off-set by unemployment benefits. The argument runs as follows. International evidence shows that more strictly regulated markets have lower inflow rates and outflow rates from unemployment. And the theoretical literature is unequivocal in arguing that regulating a competitive labour market through employment protection legislation has no effect on the average level of unemployment, although it increases the variability of employment (see among others Bertola and Rogerson 1997, Garibaldi 1998, Agell 1999, Fitoussi et al. 2000, Blanchard and Landier 2001, Boeri and Garibaldi 2007, Freeman 2005). Hence, a typical worker should choose his/her preferred regime by comparing the pecuniary and non-pecuniary net-benefits of two alternative states of the world in which the average unemployment rate is the same: one in which the labour market is regulated, so that the frequency of unemployment is lower and its duration is longer, and another in which the

[3] *Locus of control* refers to a person's belief about what causes the good or bad results in his or her life, either in general or in a specific area (Rotter, 1954; 1990). People's locuses of control can be either internal or external, depending on whether or not they tend to believe that their actions ultimately determine personal outcomes.

labour market is unregulated, so that the frequency is higher but the duration shorter. Typically, unemployment benefits compensate (at least in part) for the pecuniary losses stemming from joblessness, but they are not designed to provide relief for the non-pecuniary losses. By contrast, job protection can compress the non-pecuniary cost of unemployment by reducing the number of its episodes in a person's working life. If this is so, then the choice of seeking protection through stricter job security legislation is affected by the psychological factors that determine the relative costs of episodes of unemployment as such, and their length. Moreover, in general, frequent episodes of unemployment affect workers more than do a few longer episodes. The higher psychological costs of frequent episodes of unemployment ensue from the circumstance that "individuals first reacted strongly to unemployment and then shifted back toward their former (or 'baseline') levels of life satisfaction. However, on average, individuals did not completely return to their former levels of life satisfaction, even after they became re-employed. The findings suggests that even a short period of unemployment can cause an alteration in a person's long-term set-point" (Clark et al. 2004, p. 8). Hence, repeated episodes of unemployment have a negative psychological impact that unemployment benefits are unable to remedy because the income that would be necessary to compensate people for the loss of well-being due to unemployment is very large; and, according to many authors (see e.g. Winkelmann and Winkelmann 1998, Di Tella, MacCulloch and Oswald 2003, Frey and Stutzer 2002), it implies a replacement ratio much greater than one. Our argument is that the negative psychological impact of this phenomenon is particularly severe for fatalistic people. The latter would consequently prefer employment protection legislation which reduces unemployment episodes (even if it increases the duration of unemployment) rather than unemployment benefits which compensate only the monetary but not the psychological costs of unemployment. Thus the varying impacts of these psychological costs on workers characterized by different degrees of *fatalism* can explain the different choices made by different countries.

Conversely, in light of Algan and Cahuc's (2006a) findings, *trust in others* affects the expected cost-effectiveness of social public expenditure, and in particular of UB, in providing protection to those in need (Ferrante 2004). Empirical evidence furnishes strong support for this view: social transfers have been shown to be less cost-effective than expected owing to various political and institutional failures. Notably, social transfers are difficult to allocate according to principles of progressivity, i.e. according to people's real needs. In addition, also because of their partially discretionary nature, they are fairly easily appropriated by rent seekers, free riders and special interest groups. Furthermore, tax and social contribution evasion can significantly affect the fiscal system's ability to raise revenues and its degree of progressivity. Therefore, if average *trust in others* is low, reliance on social public expenditure and unemployment benefits as effective means to provide protection will be low as well.

Accordingly, our main prediction is that, in the absence of major political distortions, *fatalism* and the stringency of employment protection legislation (EPL) are positively related. Furthermore, we expect to find that the overall quality of the legal system affects people's perceptions of the need for protection in the labour market.

3. The empirical strategy

3.1 The World Values Survey

The World Values Survey (WVS) is a worldwide investigation of the basic values and beliefs of individuals in a large cross-section of countries (more than 80) conducted by the World Values Survey Association. It has been carried out in four waves: 1980-1984 (20 independent countries plus Northern Ireland), 1990-1994 (42 independent countries plus Northern Ireland), 1994-1999 (53 independent countries plus Puerto Rico), 1999-2004 (69 independent countries plus Northern Ireland and Puerto Rico). The survey contains information about demographics (sex, age, education, etc.), self-reported economic conditions, political preferences, attitudes, and religion. Table 3 reports summary statistics for the variables used in our analysis, i.e. job security, *fatalism* and trust.

Table 3: Summary Statistics

Country	Job Security*	*Fatalism***	Trust*	Country	JobSecurity*	*Fatalism***	Trust*	Country	JobSecurity*	*Fatalism***	Trust*
ALB	0.833	5.369	0.256	DEU	0.734	6.976	0.341	PRT	0.692	6.692	0.174
DZA	0.863	6.655	0.112	GBR	0.609	6.970	0.395	PRI	0.716	8.284	0.124
ARG	0.619	7.210	0.202	GRC	0.653	7.000	0.269	ROU	0.749	6.426	0.150
ARM	0.773	5.658	0.247	HUN	0.775	6.526	0.413	RUS	0.589	5.690	0.279
AUS	0.622	7.402	0.431	ISL	0.506	7.375	0.379	SAU	0.666	6.604	0.530
AUT	0.697	7.529	0.327	IND	0.839	6.243	0.516	SRB	0.500	6.030	0.276
AZE	0.743	5.611	0.205	IDN	0.958	7.246	0.653	SGP	0.659	7.248	0.147
BGD	0.872	5.977	0.222	IRN	0.771	6.618	0.415	SVK	0.690	6.456	0.213
BLR	0.464	5.329	0.296	IRL	0.613	7.104	0.322	SVN	0.845	6.814	0.182
BEL	0.426	6.505	0.313	ITA	0.642	6.231	0.422	ZAF	0.736	6.969	0.206
BIH	0.883	6.004	0.219	JPN	0.673	5.713	0.277	KOR	0.658	6.716	0.328
BRA	0.648	7.318	0.050	JOR	0.964	7.169	0.167	ESP	0.667	6.651	0.344
BGR	0.725	5.564	0.286	KGZ	0.745	7.064	0.111	SWE	0.577	7.296	0.623
CAN	0.665	7.535	0.455	MKD	0.876	5.921	0.188	CHE	0.683	7.184	0.370
CHL	0.706	7.132	0.224	MLT	0.615	7.345	0.290	TWN	0.749	7.431	0.382
CHN	0.610	6.970	0.553	MEX	0.662	7.618	0.184	TZA	0.793	5.800	0.081
COL	0.371	7.888	0.112	MDA	0.845	5.914	0.228	TUR	0.963	5.291	0.129
HRV	0.744	6.741	0.229	MAR	0.983	6.256	0.526	UGA	0.812	6.818	0.078
CZE	0.599	6.660	0.267	NLD	0.365	6.256	0.491	UKR	0.721	5.236	0.297
DNK	0.511	7.115	0.588	NZL	0.720	7.836	0.219	USA	0.726	7.591	0.415
DOM	0.655	7.373	0.264	NGA	0.844	6.931	0.411	URY	0.771	7.020	0.216
EGY	0.807	5.470	0.379	NIRL	0.701	7.231	0.639	VEN	0.872	8.013	0.137
EST	0.557	6.119	0.242	NOR	0.753	7.013	0.082	VNM	0.821	7.492	0.411
FIN	0.641	7.602	0.553	PER	0.479	7.065	0.269	ZWE	0.791	5.771	0.112
FRA	0.435	6.352	0.228	PHL	0.749	6.918	0.071				
GEO	0.650	6.168	0.187	POL	0.702	6.189	0.267	**Overall**	**0.683**	**6.644**	**0.301**

* Percentages; **Mean
Note: Calculated on the four waves

These variables have been determined in the following ways.

1) *Jobsecurity* is a dummy variable that is equal to one if the respondent answers that an important aspect of a job is "a good job security" to the following question: "Here are some more aspects of a job that people say are important. Please look at them and tell me which ones you personally think are important in a job: good pay; not too much pressure; good job security; a job respected by people in general; good hours; an opportunity to use initiative; generous holidays; a job in which you feel you can achieve something; a responsible job; a job that is interesting; a job that meets one's abilities". We interpret this variable as a proxy for the demand for job security among individuals. If workers believe that job security is important, they demand it.

2) Our measure of *fatalism* is based on answers to the following question: "Some people feel they have completely free choice and control over their lives, while other people feel that what they do has no real effect on what happens to them. Please use this scale (1 means "none at all" and 10 means "a great deal") to indicate how much

freedom of choice and control you feel you have over the way your life turns out." Therefore the higher the value of the variable, the lower the individual's fatalistic tendencies. A similar definition of *fatalism* can be found in D'Orlando and Ferrante (2008), Tabellini (2005) and Wu (2005).

3) *Trust* measures the level of trust in other people and is based on answers to the following question: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?". The variable is equal to one if participants report that most people can be trusted, and zero otherwise. An analogous definition of trust can be found for example in Guiso et al. (2002) or in Aghion et al. (2008).

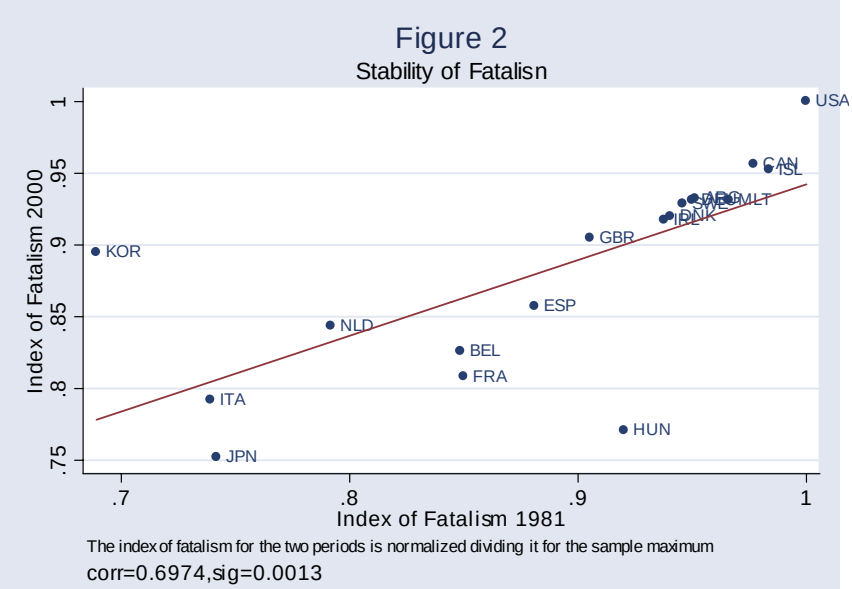
The sample may be not representative for some poor countries.[4] In Nigeria, for example, only more educated and wealthier people living in urban areas were interviewed. To tackle this problem, in the investigation reported here we always carried out a preliminary analysis which included all countries, followed by a further analysis limited to countries with more reliable samples.

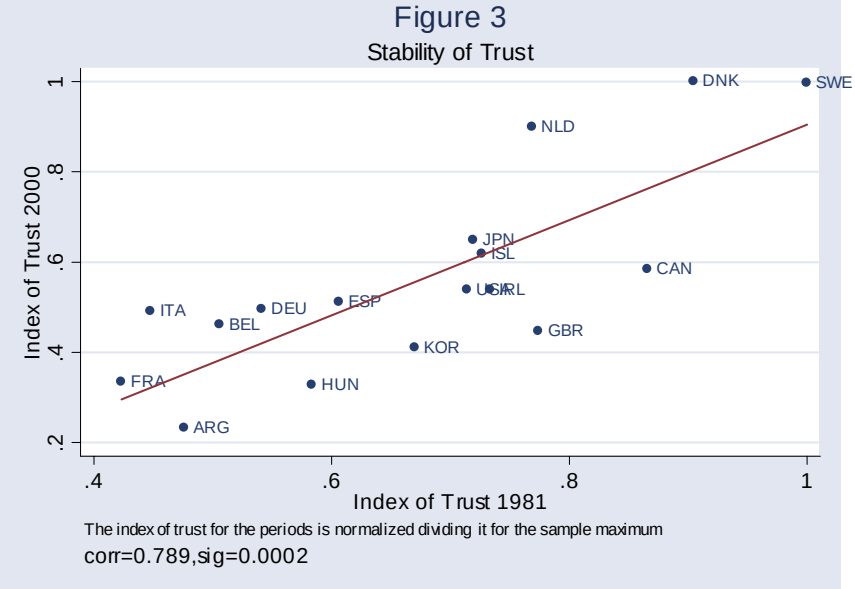
3.2 The stability of culturally-based beliefs

Theoretical reasoning as well as empirical evidence support the conclusion that culturally-based beliefs are stable and exogenous with respect to institutions (Guiso et al., 2006). Nevertheless, to check whether *fatalism* and *trust in others* are sufficiently stable cultural traits at country level, we created a country index of *fatalism* (IF) and a country index of *trust in others* (TO) for the first and the fourth wave of WVS investigation, and we computed the Pearson's correlation coefficient for each indicator between the two periods. IF was given by the mean *fatalism* at country level,[5] TO was the percentage of individuals who answered *most people can be trusted* to the relative question. We found a strong correlation across periods for both IF and TO, respectively 0.6974 (sig. 0.0013) and 0.78 (sig. 0.0002). In figures 2 and 3, we plot IF and TO calculated on the fourth wave against the same index calculated on the first wave. These results provide some support for the idea that *fatalism and trust in others* are stable culturally-based beliefs and that they can be treated as exogenous factors in our estimations.

[4] In all the regressions reported, we used sample weights suggested by the survey's authors to ensure that our estimates were nationally representative for each country and each wave. However, the weights could not adjust cases where groups of the population were not samples at all. These countries with problems of non representativity that could not be corrected were (see the technical information at http://www.worldvaluessurvey.org/ for detailed explanations): Argentina (first three waves), Bangladesh (third wave), Chile (last three waves), China (second and third wave), Dominican Rep. (third wave), Egypt (fourth wave), India (second and third wave), Mexico (second wave), Nigeria (second and third wave), South Africa (second wave).

[5] To consider the widest time interval available, we limited our analysis to only eighteen countries (Argentina, Belgium, Canada, Denmark, France, Germany, Hungary, Iceland, Ireland, Italy, Japan, South Korea, Malta, Netherlands, Spain, Sweden, Great Britain, USA), which had been surveyed on both the first and the fourth wave.





3.3 The determinants of fatalism and trust in others

Before addressing the role played by *fatalism* and *trust in others* in the demand of job protection in the OECD countries, it is convenient to analyze the socio-economic and demographic characteristics associated with these variables. For this purpose, we carried out a preliminary analysis of these cultural traits for the complete set of countries. The regressions reported in table 4 exploit all four waves but exclude some countries[6] because we lacked information about variables crucial for our analysis (demand of job security and *fatalism*). We

[6] Countries for which we did not have information about Job Security were: Colombia (third wave), El Salvador (third wave), Iraq (fourth wave), Israel (fourth wave), Rep. Of Korea (third wave), Pakistan (third wave and fourth wave), Poland (second wave), South Africa (third wave) Countries for which we did not have information about *fatalism* were El Salvador (third wave), Israel (fourth wave), Pakistan (third and fourth wave), Iraq (fourth wave), Belarus (second wave), Colombia (third wave), Poland (third wave), Turkey (second wave), Korea (third wave), South Africa (third wave), Switzerland (second wave), Great Britain (third wave), Venezuela (fourth wave).

ran an ordered probit to establish if and how individual, cultural and institutional characteristics (captured by country fixed effects) are associated with individual's *fatalism*. In so doing, we had two main purposes: to establish whether *fatalism* is a belief only determined by objective individual characteristics (such as income, age, gender, health) or also by cultural legacy (as religion), and to explore the specific link between education and *fatalism*. In particular, building on D'Orlando and Ferrante (2009), we expected to find that more educated people are less willing to believe that life-events are driven by fate rather than by actions.[7]

Table 4 shows the results of the ordered probit of *fatalism* on individual characteristics, religious denomination, country fixed effects and wave fixed effects. Column (a) reports the results of the analysis for all the countries in the sample, while column (b) shows the previous regression on a sample where non-representative countries were excluded. The signs of the coefficients are those expected.

The meaning of the great majority of variables is self-evident. As regards religion, we created a dummy variable termed 'atheist' if an individual did not belong to a religious denomination and a dummy for each of the other "dominant" religions[8]: Roman Catholic (indicated as *romcatholic*), Orthodox, Protestant, Muslim, Jewish, Buddhist, Hindu, Other religion (this has been indicated as *otherrel* and includes all religions different from the previous ones). The relative question in WVS is the following: *"Do you belong to a religious denomination? In case you do, answer which one"*. Education was measured by age (we named this variable *ageeduc*) at which the interviewed had completed (or expected to complete) his/her education, excluding apprenticeships.[9] A similar measure for education can be found in Guiso et al. (2002). We included a control for the respondent's age in our analysis. To capture non-linear effects, we also included the square of age (*agesquare*). To capture gender effects we included a dummy variable (termed '*female*') equal to one if the respondent's sex was female. It is also like that the perceived state of health influences fatalistic behavior. We consequently included this control as well, considering the question: "*All in all, how would you describe your state of health these days? (1=very poor; 2 = poor; 3 = fair; 4= good; 5 = very good)"*. We created an indicator equal to one for each state of health. These variables were respectively named *vphealth*, *phealth*, *fhealth*, *ghealth*, *vghealth*. For income we built three indicators of its level[10] which we named highincome, mediumincome, lowincome on the basis of the answers to the following question: "*Here is a scale of incomes. We would like to know in what group your household is, counting all wages, salaries, pensions, and other income that comes in. Just give the letter of the group your household falls into, before taxes and other deductions*" (income categories are coded by decile for each society, 1=lowest decile, 10=highest decile).

Table 4: Ordered Probit Fatalism

[7] We are aware that educational choices may be affected by people's *fatalism*. In this case, there would be an endogeneity problem to deal with.

[8] By 'dominant religions' is meant religions with the highest numbers of followers.

[9] We know that this measure may in some cases overestimate the level of education, so that the effect of education may have been underestimated. Unfortunately, the alternative measure of education, i.e. the highest level of education achieved, is available only for a limited number of countries and not for all periods. However, we repeated the analysis using this alternative measure (hence with a lower number of observations) and we obtained very similar results.

[10] This division of income levels is the same as proposed by the survey authors. See the codebook of European and World Value Surveys Integrated data file at http://130.15.161.74/webdoc/ssdc/cdbksnew/wvs/3975_Codebook.pdf and http://www.nrf.ac.za/SADA/CodebookPDF/S0069.pdf for detailed information.

Table 4: Ordered Probit Fatalism

(a)		(b)	
age	-.00502***	age	-.00505***
	(.00122)		(.00128)
agesquare	.00005***	agesquare	.00005***
	(.00001)		(.00001)
ageeduc	.00602***	ageeduc	.00626***
	(.00055)		(.00058)
female	-.03380***	female	-.03478***
	(.00613)		(.00641)
highincome	.08097***	highincome	.08178***
	(.00659)		(.00694)
lowincome	-.07732***	lowincome	-.07810***
	(.00729)		(.00770)
widowed	-.02154	widowed	-.02525
	(.01621)		(.01698)
separated	.00613	separated	-.00466
	(.02569)		(.02756)
divorced	-.02611	divorced	-.02911*
	(.01670)		(.01710)
cohabitation	-.03336**	cohabitation	-.02876*
	(.01481)		(.01516)
married	-.01677*	married	-.01826*
	(.00894)		(.00942)
ghealth	-.13001***	ghealth	-.13023***
	(.00769)		(.00825)
fhealth	-.24550***	fhealth	-.24681***
	(.00910)		(.00983)
phealth	-.42605***	phealth	-.42905***
	(.01569)		(.01670)
vphealth	-.52901***	vphealth	-.53264***
	(.03936)		(.04220)
parttime	.00469	parttime	-.00076899
	(.01067)		(.01114)
selfemployed	.07992***	selfemployed	.06885***
	(.01101)		(.01204)
retired	-.01090	retired	-.00498
	(.01247)		(.01297)
housewife	-.04553***	housewife	-.04579***
	(.01025)		(.01093)
student	-.03554***	student	-.03096**
	(.01296)		(.01364)
unemployed	-.13304***	unemployed	-.13826***
	(.01240)		(.01305)
otherjob	-.08959***	otherjob	-.07166***
	(.02458)		(.02562)
romcatholic	-.01853**	romcatholic	-.01577*
	(.00905)		(.00945)
orthodox	-.08529***	orthodox	-.08649***
	(.01884)		(.01942)
protestant	-.00042	protestant	.00110
	(.01166)		(.01198)
jew	-.09026*	jew	-.10385*
	(.05230)		(.05425)
hindu	.06888*	hindu	.07976*
	(.03564)		(.04634)
muslim	-.07724***	muslim	-.08661***
	(.02138)		(.02324)
buddhist	-.01706	buddhist	-.01690
	(.02418)		(.02461)
otherrel	-.01907	otherrel	-.02294
	(.01526)		(.01611)
N	179930	N	163942
Pseudo R2	.0221	Pseudo R2	.0235

Controlling for country fixed effects and wave fixed effects
White robust standard errors are in brackets
* p<.10; ** p<.05; *** p<0.01

We controlled for marital status by creating an indicator for each of the following statuses: single, cohabiting, married, separated, divorced, widowed. We also included indicators for each employment status on the basis of the question: “Are you employed now or not? If yes: About how many hours a week? If more than one job: only for the main job” (1 = full time; 2 = *part time; 3 = self employed; 4 = retired; 5 = housewife; 6 = students; 7 = unemployed; 8 = other*).

Turning to the results of the empirical analysis, income exhibits a negative relationship with *fatalism*. The reference category is medium income: the coefficient of high income has a positive sign, while low income takes a negative sign. This result is highly statistically significant in both column (a) and column (b).

As regards education, the coefficient of *ageeducation* takes a positive sign and is highly significant. Hence when education increases, so too does the probability of being a non-fatalistic person. This supports our hypothesis that education can weaken the link between transmitted culture and beliefs and make individuals more inclined to believe that they have greater control over life-events (this result holds in both samples). Unfortunately, we are unable to establish a causal link from education to *fatalism* because a higher level of education may reflect an higher level of unobserved ability possessed by an individual, so that the decrease in *fatalism* may be caused by the individual's higher skills.[11] Perhaps education plays a role in this case, too, given that the technology of skill formation is characterized by strong complementarities between cognitive skills and non-cognitive traits (Cuhna and Heckman, 2007) such as *fatalism*. Education improves people's skills, and it may make individuals more aware of their abilities and therefore less fatalistic. To be on the safe side, we merely state that there is strong evidence for a negative relation between *fatalism* and education.

Also the relation between health and *fatalism* takes the expected sign. The reference class is 'very good health': a worsening in the perceived state of health is accompanied by an increase in *fatalism*.

The effect of employment status also has the expected sign. Individuals who declare that they are self-employed are less likely to be fatalistic (the reference category is full-time workers), while the probability of being fatalistic increases for housewives, unemployed persons, and students. We are aware that the latter result may be due to reverse causality. By definition, a non-fatalistic individual is someone who thinks that s/he has control over his/her life, so that it is reasonable to assume that it is the latter attitude which influences the decision to undertake self employment, and not vice-versa.

Also gender plays a role in fatalistic attitudes, with women being more likely to believe that life-events are beyond their control. Of course, this can be rationalized in various ways mostly reliant on the impact of culture and education. Unfortunately, still today women in many countries are far from being emancipated, and values transferred through culture and education tend to strengthen an antiquated vision of the female's role. Hence, it is possible that this attitude towards women has generated a feeling of 'resignation'. Indeed, this interpretation is to some extent supported by the sign of the coefficient of housewives.

The analysis also suggests the existence of a non-linear relationship (reverse U-shaped) between age and *fatalism*: younger and older people seem to be less fatalistic.

Finally, as far as religions are concerned, people declaring that they belong to a religion show a higher probability of being fatalistic. In particular, being 'Orthodox', 'Muslim', 'Jewish' or 'Catholic' is positively correlated with the probability of being fatalistic (with the first two results strongly statistically significant in both columns). The second result is well known in sociology. The coefficients relative to 'Protestant' and 'Buddhist'[12] take positive signs but are not statistically significant. The sign of 'Hindu' is likely to be due to problems with the Indian sample, because in the 1989-93 wave the sample was designed so that 90 percent of respondents were literate (compared to a population average of less than 50 percent).[13] Note that these signs are in line with the results obtained by Algan and Cahuc (2006b).

[11] See Griliches (1977) and Card (2001) for a discussion on the ability bias.

[12] Probably, the effect of Buddhist affiliation is captured by the dummy relative to Japan. Algan and Cahuc (2006b) report that Buddhist affiliation is almost perfectly correlated with Japan.

[13] In 1999-2004, the survey was designed to be representative of 97% of the population. However, in this case too, no sample weights were provided.

The overall implications of these data confirm our hypothesis that income, education, age (up until a certain age), health, employment status, and being male exert a negative effect on *fatalism*. Still to be discussed is the impact of *fatalism* on the demand for job security.

3.4 Cultural based beliefs and demand for job protection

The next step is to consider whether and how these cultural traits affect the demand for job protection. Columns (a) and (b) of table 5 set out the results of a probit regression of *JobSecurity* on *fatalism* and *trust*, controlling for country and wave fixed effects, demographic characteristics (gender, age, education, marital status and health status), economic characteristics (level of income, employment status) and religion. Column (a) is relative to the entire sample, while the analysis reported in column (b) is limited, as usual, to representative countries. Column (c) reports the results of a Linear Probability Model on the same sample of column (b).

The signs and the statistical significance of the coefficients are the same in the three columns, with the exception of *fatalism*, which in column (a) is significant only at 10% level. This is probably due to the over-representation of wealthier and more educated people in some samples extracted from poor countries. As we noted with reference to table 4, both income and education can influence *fatalism*, so this over-representation may mitigate its effects, although they are still statistically significant.

As we expected, demand for job protection is increasing in *fatalism* and decreasing in *trust in others*. Interestingly, more educated people are less willing to demand job security, confirming the idea that education can reduce the perception of unemployment risk (D'Orlando and Ferrante, 2009).

The analysis also shows that there is a gender effect in the demand for job protection: being female reduces the probability of demanding job security. This result seems to contrast with the analysis reported in table 4, where we showed that females are more likely to be fatalistic. However, we controlled the effect of *fatalism*, so this coefficient should be interpreted as the net effect of gender. Furthermore, this result partly confirms (see also the result relative to housewife) the idea put forward by Algan and Cahuc (2006b) that job protection is more favorable to male insiders than to females

As to be expected, income (the reference is medium income) exerts a negative impact on the demand for job security. In comparison to singles, married individuals tend to demand more job security, while separated individuals do so to a lesser extent. Another result in line with our expectations concerns the impact of employment status. In the case of '*full time workers'*, we find a decrease in the probability of demanding job security with respect to all the other employment statuses, with a particularly strong effect for '*self-employed'* and '*part time workers*'. With the exception of *'retired'*, all the coefficients are statistically significant at 1% level.

Building on the latter reassuring results, we now restrict our discussion to a more reliable sample which enabled us to enrich the analysis by including institutional variables.

Table 5: Demand for Job Security vs. Fatalism and Trust

Table 5: Demand for Job Security Vs. Fatalism and Trust

(a)		(b)		(c)	
fatalism	-.00328*	fatalism	-.00423**	fatalism	-.00141**
	(.00171)		(.00182)		(.00057)
trust	-.11232***	trust	-.1112***	trust	-.03835***
	(.00841)		(.00884)		(.00301)
age	.00491***	age	.00515***	age	.00171***
	(.00158)		(.00165)		(.00055)
agesquare	-.00006***	agesquare	-.00007***	agesquare	-.00002***
	(.00002)		(.00002)		(6.017e-06)
ageeduc	-.01079***	ageeduc	-.01107***	ageeduc	-.00374***
	(.00070)		(.00075)		(.00025)
female	-.03999***	female	-.04455***	female	-.01522***
	(.00834)		(.00871)		(.00289)
highincome	-.07075***	highincome	-.07510***	highincome	-.02412***
	(.00938)		(.00987)		(.00328)
lowincome	.00759	lowincome	.00620	lowincome	.00178
	(.00951)		(.01004)		(.00324)
widowed	.02673	widowed	.02996	widowed	.00942
	(.02059)		(.02146)		(.00724)
separated	-.04822	separated	-.05628*	separated	-.02134*
	(.03004)		(.03199)		(.01129)
divorced	.04326**	divorced	.04053*	divorced	.01366*
	(.02157)		(.02199)		(.00750)
cohabitation	.05298***	cohabitation	.04871**	cohabitation	.01493**
	(.01970)		(.02041)		(.00683)
married	.07782***	married	.08013***	married	.02601***
	(.01195)		(.01257)		(.00418)
parttime	-.12860***	parttime	-.14060***	parttime	-.04805***
	(.01479)		(.01547)		(.00529)
selfemployed	-.24996***	selfemployed	-.27223***	selfemployed	-.08945***
	(.01436)		(.01574)		(.00515)
retired	-.02842*	retired	-.03401**	retired	-.01030*
	(.01626)		(.01683)		(.00559)
housewife	-.08760***	housewife	-.08337***	housewife	-.02737***
	(.01379)		(.01466)		(.00480)
student	-.08382***	student	-.09125***	student	-.02994***
	(.01795)		(.01907)		(.00629)
unemployed	-.04473***	unemployed	-.05169***	unemployed	-.01785***
	(.01616)		(.01694)		(.00523)
otherjob	-.09289***	otherjob	-.10589***	otherjob	-.03394***
	(.03268)		(.03457)		(.01085)
Controls for health status	yes	Controls for health status	yes	Controls for health status	yes
Controls for religions	yes	Controls for religions	yes	Controls for religions	yes
N	171782	N	156413	N	156413
Pseudo R2	.0904	Pseudo R2	.0951	R2	.1115

Controlling for country fixed effects and wave fixed effects

White robust standard errors are in brackets

* p<.10; ** p<.05; *** p<0.01

3.5 Cultural-based beliefs and labor market institutions in the OECD

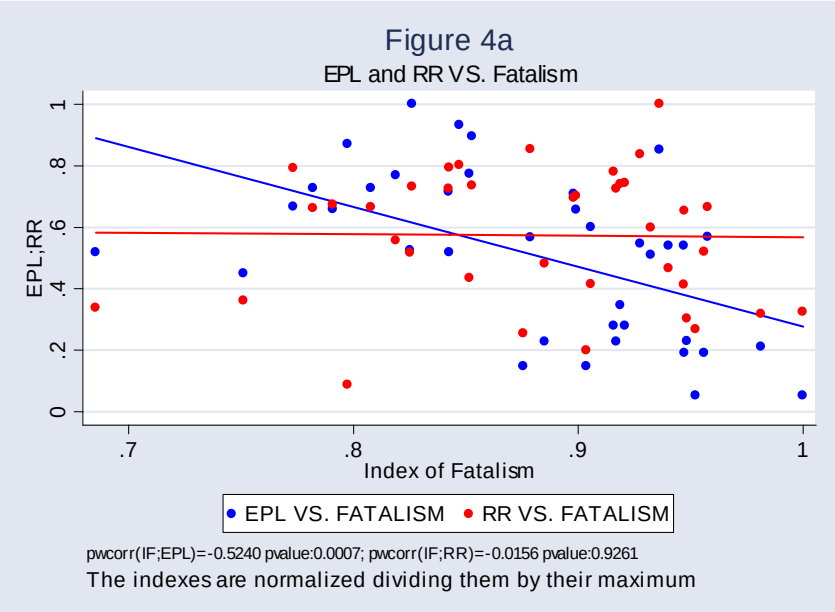
In this section we report the results of analysis based on 20 OECD countries (Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Great Britain, Japan, Ireland, Italy, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, USA) for which we had information about EPL, SPE (Social Public Expenditure) and UB (in this case, the average replacement rate during the first year of unemployment), with a total number of observations amounting to around 50,000. The source for these two last indicators is Bassanini and Duval (2006) and Eurostat.

We first estimated a model of the determinants of the demand for job security controlling for country and wave fixed effects; the idea being that the latter effects would enable us to control for differences among the overall institutional settings of countries. We then estimated a model including explicit controls for labour market institutions (EPL, SPE and UB) and for the quality of the legal system. The idea in this case was that people are concerned about the actual level of protection, i.e. the nominal level adjusted for the extent to which regulations are legally enforced. Moreover, we expected that the demand for protection would be determined also by the overall quality of the legal system. To control for these factors we adopted the index of the legal structure and security of property rights (*legalprop*) proposed by Gwartney and Lawson et al. (2009). This index ranges from 0-10, where 0 corresponds to 'no judicial independence', 'no trusted legal framework exists', 'no protection of intellectual property', 'no integrity of the legal system' and 10 corresponds to 'high judicial independence', 'trusted legal framework exists', 'protection of intellectual property', 'integrity of the legal system'.

The purpose of the analysis was to verify whether protection provided to workers through EPL, SPE and UB reduces, as we expected, the demand for job security and whether the quality of the legal system affects the latter outcome. Following Tabellini (2005) and Aghion et al. (2008), we also expected that the better the quality of the legal system, the lower the demand for regulatory institutions would be.

As preliminary evidence on the relation between culturally-based beliefs and labour market institutions, figure 4a and figure 4b show respectively the normalized versions[14] of EPL and RR (1992 and 2002) and SPE (1990 and 2000) plotted against IF calculated for the second and fourth waves. IF appears to be correlated with the measure of EPL strictness (the correlation coefficient takes a value of -0.52, $p < 0.0007$), while there is no evidence of correlation between IF and SPE and between IF and RR (the coefficients of correlation are not statistically different from zero). Since IF is higher, *fatalism* is lower, and the negative correlation with EPL takes the expected sign.

Figure 4



[14] The sample of countries is the same as in table 2. However, because of problems of non-availability of IF we were forced to consider only one period for Australia (the second wave) and for New Zealand (the third wave).

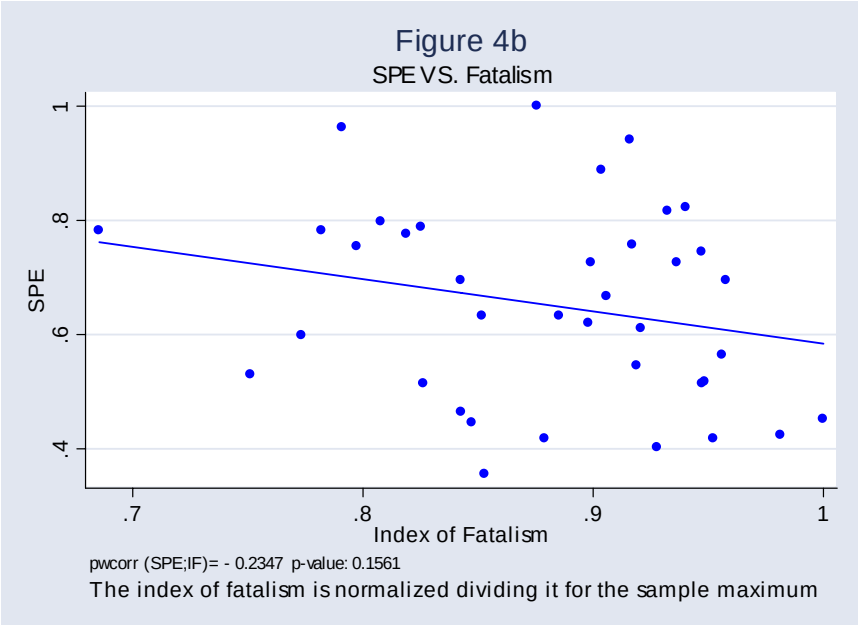
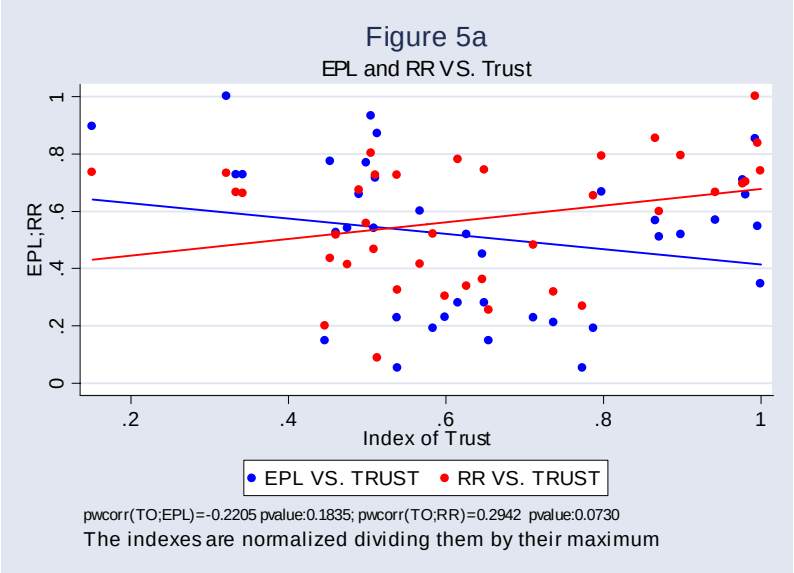
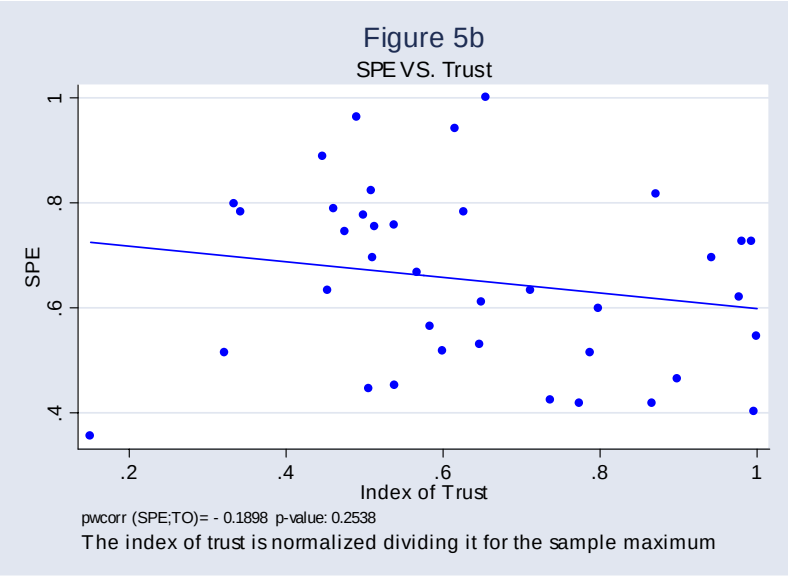


Figure 5a and Figure 5b show the same preliminary analysis for *trust in others*. We find that trust is weakly positively correlated with RR, i.e. the correlation coefficient takes a value of 0.29 ($p<0.10$), while it is not correlated with EPL and SPE, the coefficients of correlation being not statistically different from zero. The last result seems very reasonable: countries with higher levels of *trust in others* are less affected by free riding problems, and unemployment benefits are perceived as more cost-effective than in countries characterized by less trust.





To be stressed is that the econometric analysis reported in this section should not to be taken as an attempt to establish causal links: to simplify the exposition, we refer to the impacts of *fatalism* (or of impacts on *fatalism*), but these should be interpreted as correlations.

Table 6 repeats the analysis shown in table 5 but with attention restricted to the 20 OECD countries, and adding controls for EPL, UB and SPE, the quality of the legal system (*legalprop*), the interaction between stringency of EPL and the quality of the legal system, (*legepl*), and the interaction between the quality of the legal system and generosity of SPE and UB (*legspe*, *legub*). Column (a) shows the results of a probit regression controlling for country and wave fixed effects. In Column (b) we add controls for EPL and UB and for legality, while in column (c) we use SPE instead of UB. *Fatalism* and *trust in others* are strongly statistically significant in all the models; the coefficients take the expected sign; and the coefficients are larger than in the previous sample. The results for the other controls are very similar to those reported in table 6.

The impacts on the demand for job security from labour market institutions are those expected. It can be straightforwardly checked that an increase in either EPL or UB leads to a decrease in the demand for job security. This appears to contrast with the results obtained by Clark and Postel-Vinay (2005), who found a negative impact of EPL on the perception of job security, and a positive impact of UB. Therefore, if one controls for subjective culturally-based beliefs and for the quality of the legal system, EPL does not appear to reduce workers' perceived security. A corollary of this result is that observed international differences in the level of labour market regulation should be attributed, at least in part, to underlying differences in the quality of legal systems. Finally, the effects of the interactions between labour market institutions and the quality of legal systems appear quite complex and non linear.

Table 6 : Demand for Job Security Vs. Fatalism and Trust for 20 OECD countries

(a)		(b)		(c)	
fatalism	-.01592***	fatalism	-.01631***	fatalism	-.01522***
	(.00327)		(.00327)		(.00327)
trust	-.13926***	trust	-.13800***	trust	-.13638***
	(.01341)		(.01345)		(.01345)
age	.00429*	age	.00525**	age	.00499*
	(.00259)		(.00259)		(.00259)
agesquare	-.00004	agesquare	-.00005**	agesquare	-.00005*
	(.00003)		(.00003)		(.00003)
ageeduc	-.01273***	ageeduc	-.01442***	ageeduc	-.01486***
	(.00120)		(.00123)		(.00124)
female	-.04260***	female	-.04461***	female	-.0440***
	(.01426)		(.01428)		(.01428)
highincome	-.09645***	highincome	-.08436***	highincome	-.09588***
	(.01588)		(.01598)		(.01597)
lowincome	-.01700	lowincome	-.01296	lowincome	-.01250
	(.01657)		(.01665)		(.01667)
parttime	-.13781***	parttime	-.13245***	parttime	-.13519***
	(.02456)		(.02458)		(.02458)
selfemployed	-.34343***	selfemployed	-.35265***	selfemployed	-.34824***
	(.02704)		(.02704)		(.02698)
retired	-.03052	retired	-.01694	retired	-.02031
	(.02610)		(.02615)		(.02614)
housewife	-.06680***	housewife	-.06008**	housewife	-.06095**
	(.02410)		(.02410)		(.02410)
student	-.06495*	student	-.05042	student	-.05447
	(.03390)		(.03400)		(.03399)
unemployed	-.02995	unemployed	-.02620	unemployed	-.02643
	(.02999)		(.03009)		(.03008)
otherjob	-.04843	otherjob	-.04995	otherjob	-.04658
	(.04860)		(.04876)		(.04856)
		epl	-.58447***	epl	-.82448***
			(.22118)		(.21316)
		ub	-.07037***	spe	.19682***
			(.01102)		(.02497)
		legalprop	-.61189***	legalprop	-.03284
			(.07087)		(.08578)
		legepl	.05813***	legepl	.11559***
			(.02344)		(.02167)
		legub	.00876***	legspe	-.02108***
			(.00126)		(.00298)
Controls for marital status	yes	Controls for marital status	yes	Controls for marital status	yes
Controls for religions	yes	Controls for religions	yes	Controls for religions	yes
Controls for health status	yes	Controls for health status	yes	Controls for health status	yes
Controls for religions	yes	Controls for religions	yes	Controls for religions	yes
N	53968	N	53968	N	53968
Pseudo R2	.0567	Pseudo R2	.0597	R2	.0599

Controlling for country fixed effects and wave fixed effects

White robust standard errors are in brackets

* p<.10; ** p<.05; *** p<0.01

4. Summary and conclusions

People's identities and choices can be linked to psychological traits and culturally-based values and prior beliefs. The latter also shape the identities of groups and countries (Akerlof and Kranton, 2000). Our analysis has shown that people's *fatalism* and trust in others affect their choices concerning how protection should be given to workers, and that this may explain observed international differences among labour market institutions. Our paper adds study of the important role played by people's *fatalism*, hitherto neglected, to the existing economic literature on the link between labour market institutions and culturally-based prior beliefs. In addition, it provides evidence on the relation between individual socio-demographic characteristics and these beliefs, giving support to the idea that *fatalism* and *trust in others* are culturally-based psychological traits that can be partly affected by people's educations.

Like Aghion et al. (2008), we find that *trust in others* is negatively related to the demand for job security and, like Ferrante and D'Orlando (2008 and 2009), we find a positive relation between *fatalism* and the demand for job security. In contrast to Clark and Postel-Vinay (2005), our estimates show that both employment protection legislation and unemployment benefits are effective means to provide protection. Finally, our data suggest that the quality of the legal system matters in the determination of people's demand for protection.

In economics, and in democratic regimes, people's preferences are assumed to be the benchmarks against which to evaluate the goodness of institutional and economic outcomes. Data seem to show that OECD countries are characterized by different national cultural traits and that the latter determine the demand for job protection and, most importantly, how such protection should be provided. Nevertheless, the role of country-specific preferences is often neglected in the economic analysis of labour market institutions. Indeed, if one believes in democratic processes, leaving preferences aside may lead to wrong conclusions on the desirability of different institutional regimes and on the political feasibility and optimal timing of institutional reforms.

The role of education in compressing the cost of unemployment risks emerges clearly from our exercise: education seems negatively affect the demand for job protection both directly and indirectly, i.e. through its impact on *fatalism*. This result is not surprising, and it confirms that the most cost-effective way to inject flexibility into labor markets is to compress workers' psychological costs of facing unemployment risks through the provision of education.

As a final remark, our exercise confirms that culturally-based preferences and attitudes cannot be omitted from economic analysis because they shape people's expectations concerning the link between actions and outcomes. And, indeed, besides trust, also *fatalism* seems to play an important part in this context.

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APPENDIX

Table 7a: Summary statistics*

variable	N	mean	sd
trust	255399	.29548	.45626
fatalism	248224	6.64010	2.44455
jobsecurity	248476	.68234	.46557
age	264839	41.23718	16.33260
ageeduc	196380	18.27410	5.95704
female	267870	.51920	.49963
married	267870	.58887	.49204
cohabitation	267870	.04164	.19976
divorced	267870	.03604	.18640
separated	267870	.01510	.12194
widowed	267870	.06577	.24787
single	267870	.23408	.42342
lowincome	267870	.28711	.45241
mediumincome	267870	.31392	.46409
highincome	267870	.24839	.43208
vghealth	267870	.18332	.38693
ghealth	267870	.31702	.46531
fhealth	267870	.23815	.42595
phealth	267870	.05764	.23306
vphealth	267870	.01022	.10058
fulltime	267870	.37930	.48521
selfemployed	267870	.08351	.27666
parttime	267870	.07161	.25784
retired	267870	.13492	.34163
housewife	267870	.13939	.34636
student	267870	.06714	.25026
unemployed	267870	.07695	.26651
otherjob	267870	.01664	.12791
romcatholic	267870	.32641	.46890
muslim	267870	.11279	.31634
orthodox	267870	.07638	.26561
protestant	267870	.14009	.34708
jew	267870	.00651	.08045
buddhist	267870	.01455	.11974
hindu	267870	.02379	.15239
otherrel	267870	.06373	.24427
atheist	267870	.19094	.39304

* The sample is the same of table 5 (column a)

Table 7b: Summary statistics*

variable	N	mean	sd
trust	62163	.40447	.49079
fatalism	64501	6.99561	2.07354
jobsecurity	64488	.63500	.48143
age	65696	44.84364	17.19697
ageeduc	58053	18.34367	5.85693
female	65921	.52821	.49921
married	65921	.57983	.49359
cohabitation	65921	.05182	.22166
divorced	65921	.05061	.21919
separated	65921	.01732	.13048
widowed	65921	.07521	.26373
single	65921	.22104	.41495
lowincome	65921	.26482	.44124
mediumincome	65921	.30895	.46206
highincome	65921	.24651	.43098
vghealth	65921	.20829	.40609
ghealth	65921	.30063	.45854
fhealth	65921	.17641	.38117
phealth	65921	.03947	.19472
vphealth	65921	.00843	.09145
fulltime	65921	.41321	.49241
selfemployed	65921	.05842	.23453
parttime	65921	.08563	.27982
retired	65921	.18225	.38605
housewife	65921	.12697	.33294
student	65921	.05494	.22787
unemployed	65921	.05249	.22301
otherjob	65921	.01670	.12815
romcatholic	65921	.41859	.49333
muslim	65921	.00358	.05973
orthodox	65921	.00279	.05276
protestant	65921	.24473	.42993
jew	65921	.00347	.05884
buddhist	65921	.01789	.13253
hindu	65921	.00103	.03210
otherrel	65921	.05491	.22781
atheist	65921	.24402	.42951

*The sample is the same of table 6